

late in 1916 Mr. Arthur H. Howell, of the Bureau of Biological Survey, Department of Agriculture, had an opportunity to visit the locality for *Dicranopteris flexuosa* near Delchamps Station, a few miles from Mobile, recorded by the writer several years ago.⁴ That the fern is actually well established at this place is clear from Mr. Howell's observations. He writes that it was found "in exactly the situation described, in a round hole in the side of a shallow railroad cut," and adds, "The big flood of last July may have enlarged the original fissure, but apparently it did not injure the plants. I found only a single clump, comprising perhaps 40 or 50 stalks, closely bunched, in which were mixed a number of dead fronds." Mr. Howell collected several specimens, of which a part have been added to the National Herbarium.

EQUISETUM PALUSTRE IN OREGON.—This species seems to be well known as occurring in the State of Washington, but not to have been reported from the region southward. A specimen received at the National Herbarium for identification recently bears the following data: Jarboe Creek bottom, Wenaha National Forest, Oregon, altitude 4000 ft., July 30, 1916, *William E. Lawrence* 95.

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A new *Notholaena* from the Southwest¹

WILLIAM R. MAXON

In the second of a series of five articles published in the *American Naturalist* for 1875, giving an account of his botanical investigations in southern Utah during the preceding year, Dr. C. C. Parry records, in the follow-

⁴ Amer. Fern Journ. 4: 15. 1914.

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ing words, his discovery of a fern new to the United States: "At our nooning place, having reached an elevation of not less than one thousand feet above the valley of the Virgen, a deep gorge in the limestone rocks afforded a scant supply of water. In the abrupt face of these perpendicular rocks, a delicate fern was noticed, which Prof. Eaton has determined to be identical with the *Notholaena tenera* Gillies, from the South American Andes, not before found in North America. Owing to the shortness of our stay and the difficulty of securing specimens from the inaccessible positions in which they grew, only scanty collections were made, but the locality is so readily identified that some future botanist will be able to supply the demand for this interesting addition to North American Filices."² In the concluding paper (p. 351) the locality data are stated more definitely, as follows: "Crevices of perpendicular limestone rocks in a deep ravine near the base of Beaver-dam Mountains, twelve miles southwest of St. George," with brief comments by Eaton, these comparing the Utah plants with South American material. *Notholaena tenera* was originally described from Argentine specimens,³ and had been known previously only from the Andes of South America.

In "Ferns of the Southwest"⁴ Eaton published a description of "*Notholaena tenera*," basing it chiefly upon southern Utah plants, additional specimens of which were said to have been collected by Dr. Edward Palmer in 1877. A short time later, in the Ferns of North America,⁵ Eaton figured the Utah plants as *N. tenera*; and though expressing some doubt as to their proper

² Amer. Nat. 9: 140.

³ Curtis's Bot. Mag. 5: pl. 3055. 1831. Also figured by Kunze (Farrnkr. 1: pl. 22, fig. 2) and by Hooker & Bauer (Gen. Fil. pl. 76.A.).

⁴ In Report U. S. Geographical Survey West of One Hundredth Meridian, 6: 309. 1879.

⁵ 1: 335-338, pl. 43, figs. 9-13.

reference to this South American species, and citing Baker's opinion to the contrary, he nevertheless drew a description of *N. tenera* to cover both forms. The Parry and Palmer plants have not been seen by the writer. Agreeing with the figures and descriptive notes, however, are several other specimens now at hand from southern Utah and southern California, and these indicate an undescribed species wholly distinct from *N. tenera*. It may be known as below, the name being given in honor of Mr. Marcus E. Jones, author of "Ferns of the West" and for many years a keen and interested collector of this group.

Notholaena Jonesii Maxon, sp. nov.—Plants tufted, the rhizome short, oblique, conspicuously chaffy, the scales linear, very long-attenuate, thin, bright brown; fronds 3–10 cm. long, spreading, the stipes curved, closely fasciculate, reddish brown, sublustrous; blades mostly twice as long as the stipes, oblong-ovate to narrowly triangular, bipinnate; pinnae few, opposite to alternate, with one or two pairs of distant, entire to crenately lobed, roundish or subcordate pinnules and a similar, but larger, terminal segment; pinnules mostly short-stalked, the stalks flat and greenish brown; leaf-tissue apparently fleshy, herbaceous, glabrous, somewhat glaucous, not at all pulverulent; sporangia borne toward the end of the once or twice forked veins in a broad submarginal band, dark, nearly globose.

Type in the U. S. National Herbarium, No. 359447, collected in Panamint Canyon, Inyo County, California, altitude 1200 meters, May 4, 1897, by Marcus E. Jones. Additional specimens are: Fifteen miles west of St. George, Utah, *Jones* 5004d; crevices of dry limestone cliffs, mountains back of Cushenberry Spring, San Bernardino County, California, May, 1882, *S. B. & W. F. Parish* 1242; and a second Parish specimen, also collected in May, 1882, marked "Cushenberry, n. side S.

Ber. Mt." Of the several collections the specimen selected as the type is by far the largest and best preserved.

Of *Notholaena tenera* specimens are in the National Herbarium from Argentina (Cordoba, *Kuntze*), Bolivia (*Rusby* 326, 327), and Peru (*Wilkes Exped.* 4, *Safford* 992, *Rose* 19471), all from the high mountains, up to at least 3000 meters. From these *N. Jonesii* differs constantly in its much lower stature and its depressed-spreading habit, in its very much more slender, long-attenuate rhizome scales, in its reddish brown (not purplish black) stipe and rachises, in having the blades bipinnate with only the major pinnules of the larger pinnae deeply lobed or divided (as opposed to the subtripinnate blades of *N. tenera*), and in the orbicular to subcordate (not elliptical to oval) form of its pinnules, these attached to the secondary rachises by short flat-tish, greenish brown stalks in contrast to the slender, terete, purplish black stalks of *N. tenera*. The dark wiry rachises throughout give *N. tenera* the appearance of a much more slender and delicate plant than *N. Jonesii*, despite its far greater size.

Apparently *N. Jonesii* is extremely rare and not often collected. It seems to be a pronounced xerophyte and will probably not be found far from the area within which it is now known. As *N. tenera*, it has been reported from Arizona. The California localities, including at least two not mentioned above, have been discussed interestingly by Mr. S. B. Parish.⁶

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⁶ *Erythea* 1: 153-154. 1893. See also, *Fern Bull.* 12: 6. 1904.